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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

04/21/2004

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EXAMINER

MATHEWS, ALAN A

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 04/21/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,686	02/09/2001	Kenji Nishi	110157.98	7206

TITLE OF INVENTION: PROJECTION EXPOSURE APPARATUS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	07/21/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

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☐ Applicant claims SMALL ENTITY status.
See 37 CFR 1.27.

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7590 04/21/2004

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(Depositor's name)
(Signature)
(Date)

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nonprovisional	NO	\$1330	\$0	\$1330	07/21/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
MATHEWS, ALAN A	2851	355-053000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.
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Please check the appropriate assignee category or categories (will not be printed on the patent); ☐ individual ☐ corporation or other private group entity ☐ government

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(Authorized Signature)

(Date)

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This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.**

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Determination of Patent Term Extension or Adjustment under 35 U.S.C. 154 (b)

A reissue patent is for "the unexpired part of the term of the original patent." See 35 U.S.C. 251. Accordingly, the above-identified reissue application is not eligible for Patent Term Extension or Adjustment under 35 U.S.C. 154(b).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

Notice of Allowability

Applicati n N .

09/779,686

Examiner

Alan A. Mathews

Applicant(s)

NISHI, KENJI

Art Unit

2851

-- The MAILING DATE of this communication appears n th c ver sheet with the c rrespondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed 6-30-03.
2. ☒ The allowed claim(s) is/are 35-37,39-41 and 50.
3. ☒ The drawings filed on 09 February 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 08/377,504.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____. | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

Alan A. Mathews

Alan A. Mathews
Primary Examiner
Art Unit: 2851

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

The prior art of record does not disclose or suggest a scanning exposure method wherein, after finishing the exposure, moving a second object in a direction perpendicular to the predetermined direction while moving the second object in a direction parallel to the predetermined direction in combination with the other steps recited in independent claim 35.

The prior art of record does not disclose or suggest a scanning exposure method wherein, after finishing the exposure, accelerating the second object in a direction intersecting the predetermined direction while decelerating the second object in the predetermined direction in combination with the other steps recited in independent claim 36.

The prior art of record does not disclose or suggest a scanning exposure method having a second step of decelerating the second object in the predetermined direction after finishing the exposure, and a third step of accelerating the second object in a reverse direction to the predetermined direction after the second step, and a fourth step of accelerating and decelerating the second object in a direction intersecting with the predetermined direction during the second step and the third step in combination with the other steps in independent claim 37.

The prior art of record does not disclose or suggest a scanning exposure method in which, after finishing the exposure, moving the second object in a direction parallel and perpendicular to said second direction simultaneously while decelerating the first object in the first direction in combination with the other steps recited in independent claim 39.

The prior art of record does not disclose or suggest a scanning exposure method having a second step of decelerating the second object in the second direction after finishing the first step, and a third step of accelerating the second object in a reverse direction to the second direction after the second step, and a fourth step of decelerating the first object and setting the first object to a reference position during the second and third step in combination with the other steps recited in independent claim 40.

The prior art of record does not disclose or suggest a scanning exposure method wherein, after finishing the exposure, starting accelerating the second object in a reverse direction to the predetermined direction for preparing a scanning exposure onto a next defined region while moving the second object in a direction intersecting with the predetermined direction in combination with the other steps recited in independent claim 41.

The prior art of record does not disclose or suggest a controller functionally connected to a first interferometer system, a second interferometer system, a first drive mechanism, and a second drive mechanism, which converts positional information in the second

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direction of the second movable stage outputted from the second interferometer system to first speed information and speed controls the second drive mechanism so that the first speed information may correspond to a constant speed V , and which converts positional information in the first direction of the first movable stage outputted from the first interferometer system to second speed information and speed controls the first drive mechanism so that the second speed information may correspond to a constant speed V/β , where β is a projection magnification of the image of the pattern on the first object projected by a projection optical system in combination with the other elements recited in independent claim 50.

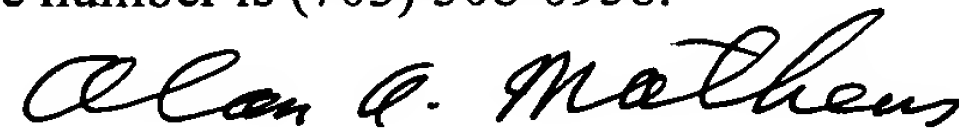
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (703) 308-1706. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703) 308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in cursive script that reads "Alan A. Mathews".

Alan A. Mathews
Primary Examiner
Art Unit 2851

AAM

What is claimed is:

[1. An exposure apparatus for radiating exposure light on a predetermined illumination area on a mask on which a pattern to be transferred is formed, and exposing the pattern on a photosensitive substrate, comprising:

a scanning system for synchronously scanning the mask and the photosensitive substrate in a predetermined first direction of the illumination area while maintaining a predetermined speed ratio; and

an illumination condition setting portion for setting the illumination area to be rectangular, and letting a light intensity distribution of the illumination area in a second direction substantially perpendicular to the first direction have a trapezoidal shape so that a middle portion of the distribution exhibits a substantially constant light intensity, and two side portions of the distribution exhibit a gradually decreasing light intensity.]

[2. An apparatus according to claim 1, wherein said scanning system scans the mask and the photosensitive substrate at least twice in the first direction, and further comprising a substrate moving system for moving the photosensitive substrate in the second direction while first and second scanning operations with respect to the mask and the photosensitive substrate are performed by said scanning system.]

[3. An apparatus according to claim 2, further comprising a mask moving system for moving the mask in the second direction while first and second scanning operations with respect to the mask and the photosensitive substrate are performed by said scanning system.]

[4. An apparatus according to claim 2, further comprising:
storage portion for storing a relative positional difference between the mask and the photosensitive substrate when the mask and the photosensitive substrate are to be synchronously scanned in the first direction; and
a controller for controlling a position of at least one of the mask and the photosensitive substrate such that the relative positional difference in the first scanning operation with respect to the mask and the photosensitive substrate coincides with that in the second scanning operation.]

[5. An apparatus according to claim 2 wherein said illumination condition setting portion determines a length M of each of the side portions, of the illumination area, in which the light intensity gradually decreases, in the second direction so as to establish

$$M=(n \cdot LP-LT)/(n+1)$$

where n is an integer of not less than one, LP is a length of

of a mask is transferred onto a sensitive plate through a projection system in a scanning manner, the method comprising the steps of:

- (a) irradiating the mask with a radiation in order to project an image portion of said pattern area of the mask onto the plate through said projection system; 5
- (b) synchronously scanning each of the mask and the plate relative to said projection system in a scanning direction at a predetermined velocity ratio by using a scanning mechanism for the scanning exposure; 10
- (c) detecting a deviation between an ideal positional relation and an actual positional relation of the mask and the plate at a term of the scanning exposure; and
- (d) correcting a position of the mask determined by said scanning mechanism for decreasing said detected deviation by using a fine moving mechanism provided on said scanning mechanism at the term of the scanning exposure. 15

[34. A scanning exposure apparatus for projecting a pattern image of a mask onto a sensitive plate through a projection system in a scanning manner, the exposure apparatus comprising: 20

- (a) a plate stage for moving the plate under said projection system in an X direction for the scanning exposure and in a Y direction perpendicular to the X direction;
- (b) a first mask stage for moving the mask in the X direction for the scanning exposure above said projection system;
- (c) a second mask stage for finely moving the mask on said first mask stage in each of translational and rotational directions;
- (d) first driving means for synchronously driving each of said plate stage and said first mask stage with a predetermined velocity ratio in the X direction during the scanning exposure; and
- (e) second driving means for driving said plate stage and said second mask stage to maintain a translational relation of the mask and plate in the Y direction and for driving said second mask stage to maintain a relative rotational relation of the mask and the plate, during the scanning exposure. 25

* * * * *

an illumination area on the mask in the second direction, and LT is a width of a pattern area, formed on the mask, in the second direction.]

[6. An apparatus according to claim 5, further comprising a projection optical system for projecting an image of a pattern of the mask, irradiated with the exposure light, onto the photosensitive substrate at a projecting magnification β , and wherein a moving amount of the photosensitive substrate moved by said substrate moving system in the second direction is defined as

$$n(LP-M)\beta$$

[7. A projection exposure apparatus comprising:

- a pulse light source for pulse-emitting exposure light;
- an illumination optical system for illuminating a predetermined illumination area on a mask, on which a pattern to be transferred is formed, with the exposure light;
- a projection optical system for projecting an image of the pattern, irradiated with the exposure light, onto a photosensitive substrate;
- a scanning system for synchronously scanning the mask and the photosensitive substrate at least twice in a predetermined first direction of the illumination area while maintaining a predetermined speed ratio;
- a substrate moving system for moving the photosensitive substrate in a second direction substantially perpendicular to the first direction while first and second scanning operations with respect to the mask and the photosensitive substrate are performed by said scanning system; and
- a controller for controlling at least one of said pulse light source and said scanning system such that a position of the photosensitive substrate in the first direction at the time when said pulse light source performs pulse emission, in the first scanning operation with respect to the photosensitive substrate and the mask coincides with that in the second scanning operation.]

[8. An apparatus according to claim 7, wherein said controller includes a position storage portion for detecting a position of the photosensitive substrate in the first direction when said pulse light source performs pulse emission, and storing data indicating the position, and controls one of said pulse light source and said synchronous scanning means on the basis of the stored data indicating the position of the photosensitive substrate.]

[9. A scanning exposure apparatus comprising:

- a scanning system for synchronously scanning a mask and a photosensitive substrate for scanning exposure; and
- an adjusting system for moving the mask to decrease a positional deviation between the mask and the substrate, independently of scanning of the mask which is performed by said scanning system, during the scanning exposure.]

[10. An apparatus according to claim 9, further comprising:

- a projection optical system for projecting a pattern image of the mask onto the substrate; and wherein
- said scanning system includes a mask stage for scanning the mask in a direction perpendicular to an optical axis of said projection optical system and a substrate stage for scanning the substrate in the direction perpendicular to the optical axis, and causes the mask stage and the substrate stage to scan at a speed ratio corresponding to a projecting magnification of said projection optical system.]

[11. An apparatus according to claim 10, wherein

said adjusting system includes a finely movable stage for relatively moving the mask on said mask stage and a driving member for finely driving said finely movable stage in the direction perpendicular to said optical axis.]

[12. An apparatus according to claim 11, further comprising:

a first measuring system for measuring a position of the mask within a plane perpendicular to said optical axis; and

a second measuring system for measuring a position of the substrate within a plane perpendicular to said optical axis, and wherein

said adjusting system includes a controller for controlling the driving member in accordance with signals from said first and second measuring systems.]

[13. An apparatus according to claim 12, wherein

said first measuring system includes a rotational angle detecting device for detecting a rotational angle of the mask within the plane perpendicular to said optical axis.]

[14. An apparatus according to claim 13, wherein

said finely movable stage includes a mirror having a reflecting surface substantially perpendicular to said plane, and

said first measuring system includes an interferometer for radiating a light beam onto said reflecting surface and receiving the light beam reflected by said reflecting surface.]

[15. A scanning exposure apparatus for projecting a pattern image of a mask onto a sensitive plate through a projection optical system in a scanning manner, the exposure apparatus comprising:

- (a) a plate stage for scanning the plate in at least one-dimensional direction under said projection optical system for the scanning exposure;
- (b) a first mask stage for scanning the mask in at least said one-dimensional direction above said projection optical system for the scanning exposure;
- (c) a second mask stage for finely moving the mask on said first mask stage in each of translational and rotational directions;
- (d) a first driving system for synchronously driving said plate stage and said first mask stage with a predetermined velocity ratio for the scanning exposure;
- (e) a detecting system for detecting a positional deviation amount between the mask and the plate in a real time manner during the scanning exposure; and
- (f) a second driving system for driving said second mask stage to decrease the detected deviation amount during the scanning exposure.]

[16. The scanning exposure apparatus according to claim 15, wherein said detecting system includes a first measuring unit to detect a relative translational deviation amount between the mask and the plate and a second measuring unit to detect a relative rotational deviation amount between the mask and the plate.]

[17. The scanning exposure apparatus according to claim 16, wherein said second drive system includes a first actuator unit for finely moving said second mask stage in said one-dimensional scanning direction and in a cross direction of said scanning direction based on said translational deviation amount.]

[18. The scanning exposure apparatus according to claim 16, wherein said second drive system includes a second

actuator unit for finely rotating said second mask stage about a predetermined point on the mask based on said rotational deviation amount.]

[19. The scanning exposure apparatus according to claim 18, wherein said predetermined point on the mask is changed in said one-dimensional scanning direction according to the scanning position of the mask.]

[20. The scanning exposure apparatus according to claim 16, wherein said first and second measuring units include a mask side interferometer system for measuring a coordinate position and a rotational angle of the mask and a plate side interferometer system for measuring a coordinate position and a rotational angle of the plate.]

[21. The scanning exposure apparatus according to claim 15, wherein each of said plate stage and said first mask stage is linearly movable in said one-dimensional scanning direction by restraining of respective linear air-guide structures.]

[22. The scanning exposure apparatus according to claim 21, wherein said first driving system includes a mask side linear motor for driving said first mask stage guided by the corresponding linear air-guide structure and a plate side linear motor for driving said plate stage guided by the corresponding linear air-guide structure.]

[23. A scanning exposure apparatus for projecting a pattern image of a mask onto a sensitive plate through a projection optical system in a scanning manner, the exposure apparatus comprising:

- (a) a plate stage for moving the plate in at least one-dimensional direction under said projection optical system which has an imaging reduction ratio $1/\beta$;
- (b) a first mask stage for moving the mask in at least said one-dimensional direction above said projection optical system;
- (c) a second mask stage for finely moving the mask on said first mask stage in each of translational and rotational directions;
- (d) an illuminating system for irradiating the mask with a radiation having a slit shaped distribution elongated perpendicular to said one-dimensional direction on the mask in order to project a slit shaped partial pattern image of the mask onto the plate through said projection optical system;
- (e) a first driving system for synchronously, relatively driving said plate stage and first mask stage with a velocity ratio B for the scanning exposure of the plate by said slit shaped partial pattern image of the mask;
- (f) a detecting system for detecting a deviation amount from an ideal positional relation of the mask and the plate occurring at a term of the scanning exposure; and
- (g) a second driving system for driving said second mask stage to correct the deviation during the scanning exposure when said detected deviation amount is out of a predetermined tolerance.]

[24. The scanning exposure apparatus according to claim 23, wherein said detecting system includes a first measuring system to detect a translational deviation amount from said ideal positional relation of the mask and the plate and a second measuring system to detect a rotational deviation amount from said ideal positional relation of the mask and the plate.]

[25. The scanning exposure apparatus according to claim 24, wherein said second drive system includes a first actuator system for finely moving said second mask stage in said one-dimensional scanning direction and a cross direction thereof based on said translational deviation amount.]

[26. The scanning exposure apparatus according to claim

24, wherein said second drive system includes a second actuator system for finely rotating said second mask stage about a predetermined point on the mask based on said rotational deviation amount.]

[27. The scanning exposure apparatus according to claim 26, wherein said predetermined point on the mask is changed in said one-dimensional scanning direction according to the scanning position of the mask.]

[28. The scanning exposure apparatus according to claim 23, wherein said first driving system includes a mask side linear motor for driving said first mask stage supported by an air-guide structure and a plate side linear motor for driving said plate stage supported by an air-guide structure.]

[29. A scanning exposure apparatus for projecting a pattern image of a mask onto a sensitive plate through a projection system having a predetermined magnification ratio in a scanning manner, the apparatus comprising:

- (a) a scanning system for synchronously, relatively scanning the mask and the plate with respect to a projection field of said projection system at a velocity ratio corresponding to said magnification ratio during the scanning exposure;
- (b) a finely movable stage provided on said scanning system for finely moving the mask relative to said scanning system in each of translational and rotational directions;
- (c) a detecting system for detecting a positional deviation amount between an ideal positional relation and an actual positional relation of the mask and the plate during the scanning exposure; and
- (d) a control system for driving said finely movable stage based on said detected deviation amount in order to decrease the positional deviation of the mask and the plate.]

[30. A scanning exposure method in which a pattern area of a mask is transferred onto a sensitive plate through a projection optical system in a scanning manner, the method comprising the steps of:

- (a) irradiating the mask with a radiation having a slit shaped intensity distribution in order to project a slit image portion of said pattern area of the mask toward the plate through said projection optical system;
- (b) synchronously scanning each of the mask and the plate relative to said projection optical system in a scanning direction perpendicular to a longitudinal direction of said slit image portion at a predetermined velocity ratio by using a scanning mechanism for the scanning exposure;
- (c) detecting a deviation value between an ideal positional relation and an actual positional relation of the mask and the plate at a term of the scanning exposure; and
- (d) correcting a position of the mask determined by said scanning mechanism so as to decrease said detected deviation value by using a fine moving mechanism provided on said scanning mechanism at the term of the scanning exposure.]

[31. The scanning exposure method according to claim 30, wherein said detecting step includes detecting a relative rotational deviation between the mask and the plate and said fine moving mechanism finely rotates the mask to decrease said rotational deviation.]

[32. The scanning exposure method according to claim 31, wherein said relative rotational deviation is detected by using a mask side interferometer system and a plate side interferometer system.]

[33. A scanning exposure method in which a pattern area



SURRENDER OF ORIGINAL PATENT AM (Exr. Initials)

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